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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/693,798	10/19/2000	Leslie V. Niles	5465	8692

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EXAMINER
SON, LINH L D

ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *31 August 2005*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-31* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-31* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is responding to the RCE received on 08/31/05.

2.   Claims 1-33 are pending.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosesd or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   **Claims** 1-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et

al, US Patent No. 5101402, hereinafter "chiu", in view of Dietz et al, US Patent No.

6651099, hereinafter "Dietz".

5.   As per claims 1 and 18:

Chiu discloses a method for providing a unique identification of monitored network data

instances flowing across various connections between networked devices, the unique

identification being derived from information contained entirely within each instance of

the network data, the method comprising: using at least one monitoring device to

monitor a network data instance flowing across at least one data connection (Col 7 lines

15-39); deriving from the data instance certain information which collectively provides a

unique identification (Col 9 lines 1-54) of the network data instance; However, Chiu

does not discloses "assembling the derived information into an input string for a hash

function; and using the output string of the hash function as a signature which

represents a unique identifier of the network data instance". Nevertheless, the method

of deriving the unique identifier using the hash function to create the signature is taught

by Dietz in (Col 6 lines 18-19, Col 13 lines 20-36, Col 13 line 62 to Col 14 line 67, and

Col 32 lines 39-67). Therefore, it would have been obvious for one having ordinary skill

in the art to incorporate the hash function to create the signature of the unique

identification data captured by the Chiu's invention. The result is a unique identifier

signature of the session or data instance in the network. This signature is unique and

minimal in sizing, which can be easily stored and processed (Col 10 lines 53-60).

6. As per **claims 2, 7-9, and 24-26**:

Chiu discloses the method according to Claims 1 and 18, wherein the deriving step

includes: deriving from the data instance a source and destination address for the data;

deriving from the data instance a source and destination port associated with the

networked devices (Col 3 lines 24-40, Col 8 lines 54-61, and Col 9 lines 3-25) (The

Transport layer header info has the ports info and The Link layer header info has the

address info); deriving from the data instance at least one sequence number associated

with data instance (Col 9 lines 33-45).

7.   As per claims 3, 4, 15, 20-21, and 32:

Chiu discloses the method according to Claims 1 and 18, which further includes:

attaching the signature to at least one data report associated with the network data

instance; and transmitting data reports and signatures from each monitoring device to a

central collecting device (Col 12 lines 7-14).

8.   As per claims 5 and 22:

Chiu disclose the method according to Claims 3 and 20, wherein the central collecting

device uses the signatures to eliminate duplicate data reports that might come in from

different monitoring devices positioned at different locations on the network (Col 12 lines

19-28).

9.   As per claims 6 and 23:

Chiu discloses the method according to Claims 1 and 18, wherein network data

instances are data packets as part of a TCP/IP (Transmission Control Protocol/Internet

Protocol) client-server network (Col 1 lines 13-24, and Col 2 lines 24-39).

10.   As per claims 10 and 27:

Chiu discloses the method according to Claims 9 and 26, wherein the at least one

sequence number includes both a client sequence number and a server sequence

number (Col 9 lines 40-45, and Col 1 lines 17-24) (The sequence number cited is the

number of packet sending back and forth by both ends).

11.   As per **claims 11 and 28**:

Ciu discloses the method according to Claims 2 and 19, wherein the input string

information does not include sequence numbers (Col 9 lines 3-9).

12.   As per **claims 12 and 29**:

Chiu discloses the method according to Claims 11 and 28, wherein the network data

instances are datagrams as part of a UDP/IP (User Datagram Protocol/Internet

Protocol) network (Col 9 line 21) (The ACK is the UDP packet).

13.   As per **claims 13 and 30**:

Chiu discloses the method according to Claims 1 and 18. However, Neither Chiu or

Dietz discloses "truncating the signature to include fewer bits than the hash function

output string". Nevertheless, It would have been obvious at the time of the invention for

one having ordinary skill in the art to reduce the output string to a fewer bits. This

operation will obviously create a uniform unique signature for storage and processing

purpose.

14.   As **per claims 14 and 31**:

Chiu discloses the method according to Claims 1 and 18, which further includes: adding

flag bits to the signature which indicate the type of application associated with the

network data instance (Col 10 line 54-57).

15.   As per **claim 16**:

Chiu discloses the method according to Claim 1, wherein the monitoring device

operates to directly monitor the network data (Col 7 lines 15-27).

16.   As per **claim 17**:

Chiu discloses the method according to Claim 1, wherein the monitoring device

operates to indirectly monitor the network data (Col 7 lines 15-27).

17.   As per **claim 33:**

Chiu disclose method for providing a unique session key of monitored network data

packets flowing across various connections between networked devices, the unique

session key being derived from information contained entirely within each instance of

the network data packet, the method comprising: using at least one monitoring device to

monitor a network data packet flowing across at least one data connection (Col 12 lines

19-28); deriving from the data packet a source and destination address for the data is

inherent in a TCP/IP network; deriving from the data packet a source and destination

port associated with the networked devices is inherent in a TCP/IP network (Col 3 lines

24-40, Col 8 lines 54-61, and Col 9 lines 3-25) (The Transport layer header info has the

ports info and The Link layer header info has the address info); deriving from the data

packet at least one sequence number associated with data instance (Col 9 lines 33-45);

attaching the unique session identifier to at least one data report associated with the

network data packet (Col 12 lines 7-28, the session identifier is collected information

from each node); transmitting the data reports from each monitoring device to a central

collecting device for analysis" in (Col 12 lines 7-28), Chiu does use the hash function

based on the current session key to access the session record which includes all the

information derived above (Col 10 lines 18-23). However, "Chiu does not assembling

the derived addresses, ports, and at least one sequence number information into an

input string for a hash function; and using the output string of the hash function as the

signature which represents a unique identifier of the network data packet".

Nevertheless, the method of deriving the unique identifier using the hash function to

create the signature is taught by Dietz in (Col 6 lines 18-19, Col 13 lines 20-36, Col 13

line 62 to Col 14 line 67, and Col 32 lines 39-67 and Fig 2). Therefore, it would have

obvious for one having ordinary skill in the art to incorporate the hash function to create

the signature of the unique identification data captured by the Chiu's invention. The

result is a unique identifier signature of the session or data instance in the network.

This signature is unique and minimal in sizing, which can be easily stored and

processed (Col 14 lines 15-35). Dietz's teaching will also provide the unique hash flow

key signature to the central node for analysis as the collected data passed from the

nodes to the central node.

Response to Arguments

18.   Applicant's arguments filed 08/31/2005 have been fully considered but they are

not persuasive.

19.   As per remark on page 11 regarding to the rejection of claims 1 and 18, Applicant

cited (Dietz, Col 6 lines 18-19; Col 13 lines 20-23 and lines 30-36) to argue that Dietz

does not teach "the output string of the hash function as a signature which represents a

unique identifier of the network data instance". Examiner believes that the Applicant

has incorrectly applied and interpreted Dietz's teaching. In Col 32 lines 39-67 and

Figure 2 teaches the KEY1 230, the flow signature. As cited in Col 13 lines 20-23, the

extracted information, described in Figure 2 KEY1 230, is a unique flow signature of the

flow or instance. The flow key is the result of the hash of the flow signature, which is

unique to every flow (Col 13 lines 30-35). Dietz utilizes the flow key to track the data

instance or flow in the database (Col 13 line 62 to Col 14 line 67).

20.   As per remark on page 11 (Id. Further, the hash in Dietz is not intended to be a

unique identifier because more than one flow entries can be stored in a bin

corresponding to the same hash. Id.), Applicant argues that the hash result is not a

unique identifier. However, the cited portion of the Dietz teaching in Col 20 lines 18-22,

which is the evidence of the argument is not accurate. The cited Col 20 lines 18-22

teaches a method of lookup a signature flow using the unified flow key buffer (UFKB),

which is the hash of the flow entry. The bin is a location of storing the hash of the flow

entry. In Col 14 lines 14-35, Dietz teaches the advantages of utilizing the hash function

for fast searching the flow entry. Therefore, it is clearly that Dietz teaches the output

string of the hash function as a signature, which represents a unique identifier of the
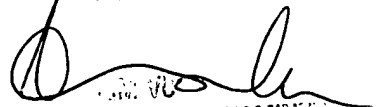
network data instance or flow.

21.   Therefore, It would have been obvious at the time of the invention was made for

one having ordinary skill in the art to incorporate Dietz's teaching with Chiu.

22.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Linh LD Son whose telephone number is 571-272-3856.

The examiner can normally be reached on 9-6 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Linh LD Son
Examiner